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10/688,527	10/17/2003	Maarten Menzo Wentink	088245-2502	7957

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EXAMINER

ANDREWS, LEON T

ART UNIT	PAPER NUMBER
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2462

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/688,527	Applicant(s) WENTINK, MAARTEN MENZO	
	Examiner LEON ANDREWS	Art Unit 2462	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6,8-12,15-22,24,26-30,33-40,42,44-48 and 50-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 8-12, 15-22, 24, 26-30, 33-40, 42, 44-48 and 50-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-4, 20-22, 24 and 38-40** are being rejected under 35 U.S.C. 103(a) as being unpatentable by the Admitted Prior Art in the Background of the application (Pub. No.: US 2004/0136339 A1) in view of Awater et al. (Patent No.: US 7,046,649 B2) and Wang (Patent Number: 5,912,644).

Regarding Claims 1, 20, 24 and 38, Admitted Prior Art discloses an access point (Fig. 1, local area network 100), method (method for transmitting using modulation scheme, ¶ [0014], page 1, lines 1-4) and article of manufacture including a non-transitory computer-readable medium having instructions stored thereon comprising:

a memory comprising a computer-readable program: and

a processor operably coupled to the memory and configured to execute the computer-readable program to cause the access point to
determining at an access point a power save status of a first device (Fig. 1, 101) configure to communicate in accordance with first modulation scheme (local area network 100 comprises 101, 102-1 and 102-2 where only one terminal can transmit at a time and 101 uses a first modulation scheme, ¶¶ [0003], [0005], [0006], page 1, lines 2-6, 1, 1); and

responsive to a determination that the first device is not in a power save state (enhanced station transmits frame detectable by the legacy station, ¶ [0015], page 1, lines 2-5),

(i) enabling transmission protection at the access point (local area network 100 use only one terminal to transmit into the channel at a time, ¶ [0003], page 1, lines 2-6); and

(ii) transmitting, from the access point, a message requesting that a second device enable transmission protection , wherein the second device and the access point are configured to communicate in accordance with the first and second modulation scheme (local area network 100 comprises 101, 102-1 and use shared communications channel to communicate in accordance with transmission protection where a short frame using the first modulation scheme is transmitted and then an enhanced station transmits a frame using the second modulation scheme, ¶¶ [0003], [0015], page 1, lines 2-5, 1-4).

Admitted Prior Art fails to disclose non-transitory computer-readable medium, memory and processor coupled to the memory. .

But, Atwater et al. discloses a computer, column 4, line 3, Fig. 6, DMA 610 and CPU 622 coupled to memory.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Atwater et al.'s limitation because this would have allowed the transceivers residing in the computer to transmit and receive, (column 4, lines 1-3.

Combination of the Admitted Prior Art and Atwater et al. fails to disclose the power save status of the device.

But, Wang discloses station goes to a power saving mode, column 9, lines 8-9.

. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Wang's limitation because this would have allowed the station to go to a power saving mode at the request of the central system, column 9, lines 8-10.

Regarding Claim 2, Admitted Prior Art discloses the method of claim 1 wherein determining the power save status of the first device (mechanism notifying the enhanced stations (Fig. 1, 102-1) to use transmission protection (power save), ¶ [0017], page 1, lines 1-3) comprises:

transmitting one of a Request-to-Send frame (Request-to-Send frame for transmission of frames using the second modulation scheme, ¶ [0016], page 1, lines 4-7), a Data frame, and a Null frame to the first device; and

receiving one of an Acknowledgement frame and a Clear-to-Send frame (Clear-to-Send frame for transmission of frames using the second modulation scheme, ¶ [0016], page 1, lines 4-7) from the first device.

Art Unit: 2462

Regarding Claims 3, 21 and 39, Admitted Prior Art discloses the device, method and article of manufacture wherein transmitting the message requesting that the second device enable transmission protection (frame detectable by the legacy station with mechanism notifying the enhanced stations (Fig. 1, 102-1, 102-2) to use transmission protection, ¶¶ [0015], [0017], page 1, lines 4-5, 1-3) comprises broadcasting a management frame (frame and a duration field for transmitting of frames using the second modulation scheme, ¶ [0016], page 1, lines 1-5).

Regarding Claims 4, 22 and 40, Admitted Prior Art discloses the device, method and article of manufacture wherein the management frame is one of:

- (i) a Beacon frame indicating that protection status is active; and
- (ii) a Probe-Response frame indicating that protection status is active.

Admitted Prior Art fails to disclose Beacon frame and a Probe-Response frame with protection status active.

But, Atwater et al. discloses Beacon frames sent at a regular interval by an AP, column 2, lines 5-6, and Probe Response frames sent by AP, column 2, lines 9-10.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Atwater et al.'s limitation because this would have allowed the Beacon frames to allow STA to monitor and Probe Response frames to allow STA to actively scan AP on a channel, column 2, lines 5-12..

Art Unit: 2462

3. **Claims 6, 8-12, 15-19, 26-30, 33-37, 42, 44-48 and 50-53** are being rejected under 35 U.S.C. 103(a) as being unpatentable by the Admitted Prior Art in the Background of the application in view of Awater et al.

Regarding Claims 6 and 42, Admitted Prior Art discloses a method and article of manufacture including a non-transitory computer-readable medium having instructions stored thereon comprising:

receiving, at an access point, a first frame from a first device (enhanced station transmits frame detectable by the legacy station, ¶ [0015], page 1, lines 2-5) configured to communicate in accordance with a first modulation scheme (local area network 100 comprises 101, 102-1 and use shared communications channel to communicate where an enhanced station transmits a first short frame using the first modulation scheme, ¶¶ [0003], [0015], page 1, lines 2-5, 1-4); and

in response to receiving the first frame from the first device (enhanced station transmits frame detectable by the legacy station, ¶ [0015], page 1, lines 2-5), (i) enabling transmission protection at the access point (local area network 100 use only one terminal to transmit into the channel at a time, ¶ [0003], page 1, lines 2-6); and (ii) broadcasting from the access point a message requesting that a second device enable transmission protection, wherein the second device and access point are configured to communicate in accordance the first modulation scheme and a second modulation (local area network 100 comprises 101, 102-1 and use shared communications channel to communicate in accordance with transmission protection where a short frame using the first modulation scheme is transmitted and then an enhanced station transmits a frame using the second modulation scheme, ¶¶ [0003], [0015], page 1, lines 2-5, 1-4).

Admitted Prior Art fails to disclose computer-readable medium.

But, Atwater et al. discloses a computer, column 4, line 3.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Atwater et al.'s limitation because this would have allowed the transceivers residing in the computer to transmit and receive, (column 4, lines 1-3).

Regarding Claims 8, 26 and 44, Admitted Prior Art discloses an access point, method and article of manufacture including a non-transitory computer-readable medium having instructions stored thereon comprising:

a memory comprising a computer-readable program: and

a processor operably coupled to the memory and configured to execute the computer-readable program to cause the access point to

transmitting, from an access point, a first message requesting that a first device enable transmission protection (local area network 100 use only one terminal to transmit into the channel at a time, ¶ [0003], page 1, lines 2-6) and a second message requesting that the first device disable transmission protection (mechanism notifying the enhanced station not to use transmission protection and to deactivate transmission protection, ¶ [0017], page 1, lines 1-5), wherein the first message and the second message are continuously transmitted in an alternating pattern (local area network 100 use shared communications channel to communicate in accordance with transmission protection where a short first frame using the first modulation scheme is transmitted and then an enhanced station transmits a frame using the second

Art Unit: 2462

modulation scheme, ¶¶ [0003], [0015], page 1, lines 2-5, 1-4), and wherein a time period separates the transmission of the first message and the transmission of the second message (frame contains a value indicating the length of time for transmission of the frames, ¶ [0016], page 1, lines 1-5); and

in response to receiving a message from a second device at the access point, adjusting, the time period separating the transmission of the first message and the second message (duration field with the length of time for transmission of frames using the second modulation scheme, ¶ [0017], page 1, lines 1-5), wherein the second device is configured to communicate in accordance with a first modulation scheme, and the first device and access point are configured to communicate in accordance with the first modulation scheme and a second modulation scheme (local area network 100 comprises 101, 102-1 and use shared communications channel to communicate in accordance with transmission protection where a short frame using the first modulation scheme is transmitted and then an enhanced station transmits a frame using the second modulation scheme, ¶¶ [0003], [0015], page 1, lines 2-5, 1-4)..

Admitted Prior Art fails to disclose non-transitory computer-readable medium, memory and processor coupled to the memory. .

But, Atwater et al. discloses a computer, column 4, line 3, Fig. 6, DMA 610 and CPU 622 coupled to memory.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Atwater et al.'s limitation because this would have allowed the transceivers residing in the computer to transmit and receive, (column 4, lines 1-3.

Art Unit: 2462

Regarding Claims 9, 10, 27-28, 45 and 46, Admitted Prior Art discloses the device, method and article of manufacture wherein, if the most recent message sent from the access point to the first device is the second/first message, adjusting the time period comprises reducing/increasing the amount of time until transmission of the first/second message (duration in the frame with the legacy terminals to cover the length of time for transmission of frames using the modulation scheme, ¶ [0017], page 1, lines 1-5).

Regarding Claims 11, 29 and 47, Admitted Prior Art discloses the device, method and article of manufacture wherein the management frame is one of:

- (i) a Beacon frame indicating that protection status is active; and
- (ii) a Probe-Response frame indicating that protection status is active.

Admitted Prior Art fails to disclose Beacon frame and a Probe-Response frame with protection status active.

But, Atwater et al. discloses Beacon frames sent at a regular interval by an AP, column 2, lines 5-6, and Probe Response frames sent by AP, column 2, lines 9-10.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Atwater et al.'s limitation because this would have allowed the Beacon frames to allow STA to monitor and Probe Response frames to allow STA to actively scan AP on a channel, column 2, lines 5-12..

Regarding Claims 12, 30 and 48, Admitted Prior Art discloses the device, method and article of

Art Unit: 2462

manufacture, wherein the message received from the second device is a legacy modulation frame (Fig. 1, 102-1 using first modulation scheme, ¶¶ [0007], [0009], page 1, lines 1-2, 1).

Regarding Claims 15, 33 and 35, Admitted Prior Art discloses the device and method,

wherein the first/second modulation scheme (Fig. 1) is based at least in part on one of Barker modulation and Complementary Code Keying modulation; and

wherein the first/second modulation scheme (Fig. 1) is based at least in part on Orthogonal Frequency Division Multiplexing modulation.

Admitted Prior Art fails to disclose Complementary Code Keying modulation and Orthogonal Frequency Division Multiplexing modulation.

But, Atwater et al. discloses CCK, Complementary Code Keying, column 1, lines 43-44, and OFDM, Orthogonal Frequency Division Multiplexing, column 1, lines 47-48.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Atwater et al.'s limitation because this would have allowed the stations to communicate to the access points, column 1, lines 28-32.

Regarding Claims 16, 34 and 50, Admitted Prior Art discloses a device, method and article of manufacture including a non-transitory computer-readable medium having instructions stored thereon comprising:

a memory (Fig. 6, DMA 610) comprising a computer-readable program; and

Art Unit: 2462

a processor (Fig. 6, CPU 622) operably coupled to the memory and configured to execute the computer- readable program to cause the device to

transmitting from an access point a first frame (frame transmitted and detectable by the legacy station in accordance with transmission protection, ¶ [0015], page 1, lines 1-5); and comprising a duration field value (duration field in the frame contains a value, ¶ [0016], page 1, line 1) to a first device (Fig. 1, 101) via a shared-communications channel (shared communications channel, ¶ [0003], page 1, lines 4-5) in a wireless local area network (Fig. 1, wireless local area network, ¶ [0003], page 1, lines 1-2) in accordance with a first modulation scheme (Fig. 1, first modulation scheme, ¶ [0006], page 1, line 1), wherein the first device is configured to communicate in accordance with the first modulation scheme and a second modulation scheme (Fig. 1, 101 using first modulation scheme and uses the second scheme in order to detect 102-1 and 102-2, ¶¶ [0005], [0006], [0013], page 1, lines 1, 1, 4-6); and

receiving at the access point a second frame (frame transmitted by enhanced station, ¶ [0015], page 1, line 2) from a second device (Fig. 1, 102-1) via the shared-communications channel in accordance with a second modulation scheme (frame transmitted by enhanced station using the second modulation scheme, ¶ [0015], page 1, lines 2-3) during a time interval (length of time for transmission of frame using the second modulation scheme, ¶ [0016], page 1, lines 4-5) defined by the value wherein the second device is configured to communicate in accordance with the second modulation scheme (102-1 communicate using the second modulation scheme, ¶ [0013], page 1, lines 1-2);

wherein the first frame is undetectable to the second device (first short using the first using the first modulation scheme is detectable by the legacy station, ¶ [0015], page 1, lines 3-5); and

wherein the first modulation scheme (Fig. 1, first modulation scheme, ¶ [0006], page 1, line 1) and the second modulation scheme (Fig. 1, second modulation scheme, ¶ [0009], page 1, line 1) are different from each other.

Admitted Prior Art fails to disclose non-transitory computer-readable medium, memory and processor coupled to the memory. .

But, Atwater et al. discloses a computer, column 4, line 3, Fig. 6, DMA 610 and CPU 622 coupled to memory.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Atwater et al.'s limitation because this would have allowed the transceivers residing in the computer to transmit and receive, (column 4, lines 1-3.

Regarding Claims 17 and 51, Admitted Prior Art discloses the method and article of manufacture,

wherein the first modulation scheme (Fig. 1) is based at least in part on Orthogonal Frequency Division Multiplexing modulation; and

wherein the second modulation scheme (Fig. 1) is based at least in part on one of Barker modulation and Complementary Code Keying modulation.

Art Unit: 2462

Admitted Prior Art fails to disclose Complementary Code Keying modulation and Orthogonal Frequency Division Multiplexing modulation.

But, Atwater et al. discloses CCK, Complementary Code Keying, column 1, lines 43-44, and OFDM, Orthogonal Frequency Division Multiplexing, column 1, lines 47-48.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Atwater et al.'s limitation because this would have allowed the stations to communicate to the access points, column 1, lines 28-32.

Regarding Claims 18, 36 and 52, Admitted Prior Art discloses the device and method and article of manufacture, wherein the transmitting is one of (i) periodic and (ii) sporadic.

Admitted Prior Art fails to disclose transmission is periodic.

But, Atwater et al. discloses periodic transmissions, claim 29, column 15, line 40.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Atwater et al.'s limitation because this would have allowed the first system not to transmit when the second system is receiving, claim 29, column 15, lines 42-44.

Regarding Claims 19, 37 and 53, Admitted Prior Art discloses the device, method and article of manufacture, wherein the first frame further comprises instructions to refrain from transmitting frames for a time interval.

Admitted Prior Art fails to disclose refrain from transmitting for a time interval.

But, Atwater et al. discloses Bluetooth transceiver is deactivated (for a time interval) by the interoperability device whenever the IEEE 802.11 transceiver is activated and vice versa, column 6, lines 34-37.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Atwater et al.'s limitation because this would have allowed the decision to be made as which mode of operation to switch to or activate, column 6, line 38-39.

Response to Arguments

4. Applicant's arguments filed January 5, 2011 have been considered. But, in view of the new grounds of rejection necessitated by the amendments to the claims and the use of new prior art, the arguments are moot.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

Art Unit: 2462

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leon Andrews whose telephone number is (571) 270-1801. The examiner can normally be reached on Monday through Friday 7:30 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rao S. Seema can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Leon Andrews/
Examiner, Art Unit 2462
March 7, 2011
/Seema S. Rao/

Supervisory Patent Examiner, Art Unit 2462